

1 / PART

09/509204

422 Rec'd PCT/TO 23 MAR 2000

1

**SPECIFICATION**

**VIRTUAL PERSONS FOR ASSISTING IN THE USE OF DEVICES AND COMMUNICATIVE NETWORKS, PARTICULARLY FOR ASSISTING IN THE OUTPUT OF INDIVIDUALLY USEABLE CARDS**

**BACKGROUND OF THE INVENTION**

~~Technical Field:~~

The invention is directed to a method for audio-visual presentation of data and/or programs that are used by users in communicative networks for the transmission and/or presentation of audio-visual data and/or programs, upon employment of an electrical device having an optical and/or acoustic display means such as a picture screen and/or loudspeaker, for audio-visual presentation of these data and/or programs ~~according to the preamble of claim 1~~ and is also directed to an apparatus for the implementation of the method.

~~Problem:~~

In technical systems for the transmission of audio-visual data and programs, for example for electronic purchasing or money transfers, particularly with increasing networking of the systems with one another, the question of authenticity, namely the assurance of the veracity of the presence of a user H of the system is <sup>becoming significant</sup> ~~obtaining to significance~~. A user H in network systems can physically be at location Y at time T1, whereas it is simulated to the system that he was located at location X at the same time, whereby this dissimulation is to be precluded. Programs that are authorized to implement actions over a time duration by a user are called authenticated programs. Likewise, more and more chip cards are entering into traffic for utilizing such devices for the purpose of purchasing or for participating in traffic and many other things.

**SUMMARY OF THE INVENTION**

~~Technical Objective:~~

The object of the invention is to facilitate the operation of the systems and/or devices and/or networks for users of technical systems and/or apparatus that

are connected to one another via electronic, communicative networks, in that programs and apparatus that act virtual persons for a user in the networks, namely as apparent persons generated by programs, are authenticated by the user H. Further users of the network should be able to depend thereon such that a virtual person is authorized by its creator to act in a specific situation. In particular, a virtual person should be suitable for the output of chip cards in the card service center.

#### Disclosure Of The Invention And the Advantages Thereof:

The object is achieved by the features of the claims. Advantageously, a deception of the system is thereby precluded, namely to the effect that a user was located at location X at point in time T1, by contrast whereto he was physically located at the location Y at the same time T1. Advantageously, the method or, respectively, the apparatus generates virtual persons with whom the user can enter into interaction. Likewise, further users of the network can depend thereon that a virtual person is authorized by its creator to act in a specific situation. Inventively, it is possible to facilitate the utilization of electronic apparatus and/or systems, as are present due to the connection of apparatus in communicative networks, in that certainty is produced regarding the authorization of the use and activation of programs by user H.

#### BRIEF DESCRIPTION OF THE DRAWINGS

The drawing serves the purpose of revealing the limitation between the possibilities of presenting virtual persons VP on technical equipment:

Figure 1 <sup>schematically</sup> shows the presentation possibilities of virtual persons VP on technical equipment in three illustrations a, b and c; and  
Figure 2 symbolically shows a card service center.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

H references the natural user H of a technical equipment T3, this user residing at location X. T3 is composed of a technical apparatus system at location Y that contains a medium for visual presentation, as represented by

a two-dimensional picture screen or - in future - also represented by three-dimensionally displaying medium. T3 can also contain devices for acoustic input and output of information. In particular instances, T3 can also contain mechanical devices that simulate or image the movements of a user H. It can be a matter of technical systems that transmit mechanical force via levers and can move in space. Such systems for simulating human movements are known. Mechanical systems can also be employed that register the movement of a user H, for example in tactile form, and transmit them from the location X to the location Y in the form of electronic data.

Section 1a of the Figure symbolizes how data of a natural person H are acquired by sensors T1, and how the properties and movements of H are forwarded to a technical system T2 via connecting elements C2, namely lines, visual, acoustic or tactile transmission elements. T2 is composed of the standard devices of a data-processing system, such as electronic processor, memories for data and programs. T2, with its programs, is in the position to control the system T3 with the data that arrive via C2. In this way, T3 can present images of H audio-visually and/or spatially in the form RVP (related virtual person). There is a relationship between sensor acquisition T1 and presentation of a virtual person with the assistance of T3. Such systems mainly serve for simulating the spatial behavior of humans. Answer backs to the user H can be communicated via the data link C4 in the form of visual presentations and/or tactile sensory impressions that a user H can perceive, for example in audio-visual helmets or in gloves or other touch devices.

The illustration of the technical devices T1 from Figure 1a is omitted in Figure 1c. A user H directly controls the technical system T2 that is constructed in a comparable way compared to the description of Figure 1a. The control preferably ensues via a keyboard or further auxiliaries such as mouse and/or joy stick. A virtual person VP generated by a program T2 appears on the system T3. This virtual person VP mainly serves for the presentation of

playing Figures - playing virtual person - whose behavior is controlled by the user H via the operating elements of T2.

Figure 1a and Figure 1c symbolize the two extremes of the linking of the presence of a natural person H with a program T2 and the presentation of this person on a technical system T3. Figure 1a symbolizes an automatic linking, RVP acts analogous to H, and, thus, only during the time that H is acquired by the device T1. In Figure 1c, PVP also acts when H is no longer present and the programs in T2 are activated. In the world of future networks and systems, it will be of significance to know whether a program in T3 is still authorized by a user/prime mover to act. The user H will generate the conditions for the authenticity with an input device T4 in conformity with the patent.

In Figure 1b, a technical means T4 for authentication, namely documenting the veracity or, respectively, the presence of the user H is present. T4 can be implemented as apparatus for reading a plastic card that contains a code that identifies a user H. T4 can also enable a biometrical acquisition of the features of a user H. In the simplest case, T4 is implemented as keyboard via which the user H inputs an encoding for authentication. Via the data lines C2, the coding specific to the user H is forwarded into the system T2. By program, T2 generates a virtual person VP that is compiled of the greatest variety of program elements in T2 to form the one-time, individual-virtual person IVP. A particular feature of the <sup>invention</sup> ~~patent~~ is the time feedback C4 between user H and authentication. For example, a number like a PIN code is additionally input together with the insertion of a card into T4. This number is not located in the system T4 but only on the card. Only when there is agreement between PIN and information in the card has the authentication ensued. The input device T4 can repeatedly query via C4 as to whether H is still triggering inputs. The individual-virtual person IVP remains in existence, i.e. presented in the system T3, limited in time to the same time span wherein an authentication ensues in T4. The individual-

a

5 virtual person IVP only exist during the time duration that an authentication or, respectively, identification is present at the input device T4. This contrasts with the illustration in Figure 1c wherein the PVP remains active as long as the system T3 is active. The authentication assures that the IVP is not present in the system T3 when no authenticity from the user H is present on the basis of an identification. As described <sup>herein</sup> ~~in the patent~~, anonymous parts of the individual-virtual person IVP can be present in the system T3 for purposes of data interrogation and/or for handling tasks. The complete, individual-virtual person IVP that contains all data and programs

10 that were allocated to it by a user H is only present in the system as long as an authentication (veracity, guarantee) by the user H is established. It is also possible that the user H does not grant a complete authentication for his individual-virtual person IVP but only sends parts of the IVP into the system T3 in that he grants a limited authentication.

15 It is thus critical that the authenticated, virtual person - whether neutral-virtual or individual-virtual - requires a time-defined acquisition with a code or chip card or the output of a sonogram or a fingerprint of the user in order to be technologically created.

a

20 According to the <sup>invention</sup> ~~patent (claim 1)~~, apparatus T3 comparable to personal computers are utilized that allow natural persons H to be audio-visually imaged and/or simulated, these being called virtual persons. This virtual person simulates audio visual presentations of a type accorded natural persons at/in the apparatus by graphics, acoustics. Picture screens and/or loudspeakers are used for the audio-visual presentation. Picture screens are

25 known in these apparatus T3 and display devices are utilized that can be constructed extremely thin, like pictures, capable of being hung on the wall. Devices are also being developed that allow three-dimensional presentations in a spatial volume. These devices assist the person in meeting numerous tasks such as writing, calculating by tabular calculation, telephoning,

30 communicating via Internet, getting money, transferring money, booking

tickets for performances and travel, etc. Persons that use the apparatus for  
 meeting tasks are called users H. As a result of the versatile use  
 possibilities, the users H of these apparatus are confronted by the problem  
 of learning the special operation of the apparatus via a keyboard and/or  
 screen and/or optical/acoustic inputs/outputs. In a known way, menus are  
 utilized for this purpose. A more advantageous aid for the user H is  
 established in conformity with the patent when a virtual person generated by  
 program is employed. A user H of the apparatus T3 thus does not  
 communicate with a program that generates specific symbols and written  
 characters or acoustic signals but with an embodiment of a program T2 that  
 generates features similar to a person and is called virtual person. It is  
 disclosed <sup>herein</sup> ~~by the patent~~ that a user H of the apparatus T3 and/or network  
 C1....Cn can request his specific, individual person with the assistance of a  
 device T4. This individual-virtual person IVP can only be activated via a  
 specific encoding at/in the input apparatus T4. A specific, individual  
 assistance in the form of an individual, virtual person referred to the user H  
 is thus available to a user H. This individual-virtual person IVP has the  
 features that are defined by the user H. In this way, this individual-virtual  
 person IVP is distinguished as a specific, virtual person; recognizing this  
 virtual person again can be possible for the user H in a way comparable to  
 recognizing a natural person. The virtual person VP assists a user H in his  
 individual utilization of the apparatus/network in a way that would be  
 comparable to an arbitrary, human person.

The individual assistance can - according to user requests - can be  
 optionally produced or, respectively, transmitted audio-visually by  
 apparatus/network from remote devices in the form of a virtual person VP.  
 Different virtual persons VP1, VP2....VPn can be present in the  
 apparatus/network. A specific user H and/or group of users H1, H2...Hk is  
 unambiguously allocated to a specific, individual-virtual person VP on the  
 basis of an identifier and/or encoding and/or program. The allocation can  
 ensue via the input of a code, for example with a card in an input device T4,

but can also ensue in T4 by interrogating fingerprints, technical, automatic interpretation of signatures or by other biometrical features that are unique to an individual person. The individual-virtual person IVP is activated on the apparatus T3, in the network C1....Cn only during a time span  $\Delta t$ . The time span  $\Delta t$  is defined by the identification of the user H with his specific feature in the input device T4. The input device T4 makes sure of the presence of the user - identification, the presence of the code - by a repeated feedback in time - such as a repeated query. During this time span  $\Delta t$ , the individual - virtual person IVP is authenticated in its actions by the user H for other users of the device T3, network C1....Cn. Authenticity in the sense of the patent means further uses of the devices T3, of the network C1....Cn can depend thereon that the individual-virtual person IVP is authorized to act by its user, master, creator, prime cause. When the authentication is ended by the input device T4, the individual-virtual person IVP is no longer authenticated to act.

The programs and data that define an individual-virtual person IVP can be present in various devices and systems T2a...T2x as sub-programs and/or sub-data. It is thus a matter of programs and/or data that are locally separate from one another. The compilation and/or joining of the sub-programs and/or data in a device T3 for the audio-visual presentation of a virtual, uniform person VP that is composed of all programs present locally separate can ensue time-dependent. The sub-units are combined into one unit at a device in a network, and the individual-virtual person IVP is authenticated to act only during the time span  $\Delta t$  when a user H of the device reveals himself with a specific feature and/or a coding. When the individual-virtual person IVP independently interrogates the input device T4 for the purpose of authenticity, it can also end its existence/activities on its own. Program parts that call delete routines in a known way given the omission of information can be connected to an individual-virtual person IVP.

5 A virtual person VP can have different data sets available to it that differ in terms of their security features. Some of the data can be available for an unprotected data inquiry, whereas others have data that can only be called by protected data interrogation. The protection of the data can ensue via specific keys or cryptographic methods that are called by encodings that are input into T4. The unprotected data can be presented on a technical device T3 by the virtual person VP given an inquiry. The unprotected data thus represent a part of an individual-virtual person. This part can be configured such that it is identical to other virtual persons. Many identical, virtual persons can also be presented as a neutral virtual person. The virtual, neutral person VP contains features that symbolize a specific situation or behavior of a person to a data inquirer. The protected, secured data that belong to an individual-virtual person IVP are not disclosed. The neutral, virtual person is limited in its action vis-a-vis the individual-virtual person IVP and can also be active during a time span that lies beyond  $\Delta t$ .

10 A home computer or PC is a technical device T3 that is provided with audio-visual devices such as displays, loudspeakers and devices for data storage and data processing as well as one or more microprocessors and is thus suitable for the presentation of virtual persons. An individual-virtual person IVP that is allocated to a specific user H of the PC on the basis of a specific coding and/or program can be presented on a PC. The device part T4 can be integrated in the PC. A specific virtual person is thus connected to a specific home computer.

20 Home computers contain operating systems that simplify the use of the various technical parts and/or functions of a home computer for persons. The individual-virtual person IVP appearing on the visible surface of a home computer can assume jobs that are implemented by traditional operating systems of a type currently in the marketplace. Further, a specific function can be carried out given the individual-virtual person IVP by cursor movement to a point, namely clicking a geometrical location of the individual-



virtual person. When touching the mouth, for example, voice output via loudspeaker can ensue. The presentation of the individual-person IVP is determined by the operation of the T4. A remote program vendor can thus determine whether programs are available beyond the time span  $\Delta t$ . An interaction of traditional operating system and individual, virtual person IVP can also ensue. For example, the help function as symbolized by a question mark on contemporary computers and which is widespread can be carried out by a virtual person. The virtual person can sit at the location of the question mark and is limited to the time of its authenticity in terms of its availability in time.

When an individual-virtual person appears on a device, a legible script can simultaneously also appear, this, for example, being linked to the virtual person symbolized as a "speech bubble". An information that can be read and/or heard by a person or can be interpreted in some other way can thus appear in addition to a virtual person. The writing can also appear when the functions for speech output are malfunctioning.

It is possible for a user H of a device to fashion his individual-virtual person into a standardized virtual person by expansion or, respectively, supplementation. First, a virtual person VP1 that belongs to a group of virtual persons VP1, VP2...VPn having comparable programs and/or data and/or features appears on a device. Programs, data and/or features are additionally added and/or joined to the VP1 only in the time span  $\Delta t$ , the VP1 thus assuming a specific embodiment. As a result of the specific features, the standardized or, respectively, neutral-virtual person VP1 becomes an individual-virtual person. It is thus possible for a user H to allocate his individual-virtual person to a specific basic type, for example male or female.

It can be desirable that data and/or programs are interrogated only in a specific time window and determine the properties of the individual-virtual person IVP. To this end, the interrogation of data and/or programs that are

allocated to an individual-virtual person IVP is only possible for data and/or programs that arose before a point in time or within a time span  $\Delta t$ . All data and/or programs are inhibited that arose before this point in time or beyond the time span  $\Delta t$ . The time can be present as a feature in encoded form in programs in the same way that it is currently present in memories and allocated to programs and data. The activation of technical devices and/or systems occurs controlled by time in this way and during the time of the authentication.

A plurality of natural persons can be simultaneously located in the proximity of an audio-visual registration device in a room. It can be meaningful that not all features, properties of an authenticated, virtual person are presented on a device as long as more than one person is in the room. A first person can be in the room who is authorized to recognize all features of a virtual person, whereby the second person does not have this authorization. In conformity with the patent, only a limited individual-virtual person IVP appears on the device during the time wherein at least two natural persons are found. The limited individual-virtual person IVP has only a part of the features, programs and/or data available to it that the complete individual-virtual person IVP has available to it.

Standardized virtual persons VP having described, standardized, recurring properties can be contained in a device or, respectively, communicative network, these also being called neutral virtual persons. This neutral virtual person VP is prepared for adaptation to user wishes and should facilitate the generation of an individual-virtual person VP for a user. A user who has a technical auxiliary available, for example a chip card or a remote control or a telephone, whereby data and programs are contained in these auxiliaries, can input these data or, respectively, programs into the communicative device/network and can thus modify the standard properties. It is thus possible that a standardized virtual person VP becomes an individual-virtual person VP by adding data, programs. This individual-virtual person VP can,

for example, have a voice and/or an appearance that seem familiar to a user. These properties can be maintained over longer times for the virtual person.

It is not necessary that the virtual person VP be generated in the device that is operated by the user. When the device operated by the user is connected to a remote device by communicative, line-bound connection, optical fiber as well, and/or wire-free connection, the virtual person VP can be generated in the remote device by a program and can be transmitted to the device at the location of the user.

It is possible that two virtual persons VP1, VP2 communicate via a network instead of their users H1, H2. The virtual persons VP1, VP2 can exchange data/program/information instead of the two users. Thus, for example, one virtual person VP1 can be assigned the job of retrieving the day of the week on which the year 2000 begins. There could be a virtual person in a communicative network that is specialized for supplying days of the week for days of the calendar. By bringing the two virtual persons together, the objective is achieved in that the week day is spoken by the VP1 for a user.

Users of electronic memory systems and/or communicative networks can have themselves represented by virtual persons that have only a part of the personal data of a user available to them. The neutral-virtual persons VP1, VP2...VPn have a part of the data available to a user stored. The data of the virtual persons VP1, VP2...VPn thus correspond to a sub-set of the data VD1, VD2...VDn of users H1, H2...Hk. The overall set of data of a user Hn can only be made available to the communicative network and/or device system via specific electronic encodings. For example, statistical data, for example traffic utilizations, can thus be acquired about persons without the personal, protected data of the persons being accessible.

A user H can also have himself represented by a specific virtual person VP in an electronic memory system and/or an electronic communicative network.

The example of seeking a day of the week for a calendrical date was recited above with respect thereto. The virtual person VP carries out jobs that are prescribed by a user H. When it is a matter of a virtual person having individually defined and unchanging features, this virtual person VP can be considered to be the representative of a user nU.

Two virtual persons VP1, VP2 can exchange data with one another, whereby the data exchange results in the modification of the individual features of a virtual person. A virtual person VP1 that encounters the virtual person VP2 in a program for a weather report can outfit himself with an umbrella that the virtual person VP2 has carried.

Likewise, a virtual person VP can independently modify itself by program, so that it can be sent on a trip to Hong Kong in a communicative network and can symbolically lie down on a bed in order to indicate that there is an influenza epidemic there and that it is not advisable to travel to Hong Kong. The modification of a virtual person makes it easier for the user H to understand the specific qualities of this virtual person VP.

A virtual person VP can be activated by events that were not caused by a user H. For example, a time of day can activate a virtual person, a user being awakened at the correct time as a result thereof. Likewise, an alarm system in a vacation home can activate a virtual person that informs its user.

A home computer can present a local, individual-virtual person whose properties are defined by an encoding that is connected to the home computer. This local, virtual person can be an unrestricted, individual-virtual person IVP. For example, a waiter in a restaurant can have a portable PC that represents an individual-virtual person IVP of a restaurant patron. The individual-virtual person IVP shows the menu of the restaurant. At some other location, the individual-virtual person IVP will show the schedule of the municipal mass transportation.

An individual-virtual person IVP can appear in a game and represent and/or replace a natural person. It is thus possible for a natural person to design a game with a specific, individual-virtual person as long as an authenticity is present. A teacher can be presented by an individual-virtual person IVP and can communicate lessons. It is thus defined that the individual-virtual person IVP acts in an authentic fashion.

When an individual-virtual person IVP is connected to a device that automatically receives data and/or programs from satellites, the virtual person can, for example, indicate where the device is located in the world.

Current films have natural persons as actors. These natural actors can also be presented by a virtual person IVP. Films and/or programs can be constructed such that virtual persons carry out the actions and are mixed into the executive sequence of programs. The virtual person carrying the action can be replaced by an individual-virtual person IVP. An action is thus produced that is carried by the individual-virtual person IVP that a user H defines as acting person. It is assured that the individual-virtual person IVP is authorized to perform the action only during the time span  $\Delta t$ .

An individual-virtual person IVP can be transmitted to remote devices via a communicative network. For example, a transmission can be provided into a device that is utilized in an underground pipeline network.

The individual-virtual person IVP can carry out specific operations and/or device settings in the remote device. When the operations and/or device settings correspond to those that a natural person has initiated, the remote device is controlled via an individual-virtual person that is authenticated by a user.

An individual-virtual person IVP accomplishes jobs in a device remote from the location of the user, whereby the device has technical equipment

available to it that can acquire data and/or programs in the remote environment, whereby the acquired data and/or programs are transmitted to the location of the user, whereby the remote data and/or programs are edited at the location of the user, the user H thus encountering an audio-visual environment that corresponds to the remote environment.

An individual-virtual person IVP can have a proposal list of behaviors and/or settings. This proposal list makes it possible for a user H to define specific, virtual properties of a virtual person IVP. Further, the communication between two natural persons can ensue via an individual-virtual person IVP.

An individual-virtual person IVP can appear as interpreter insofar as two natural persons at different devices would like to communicate in different languages. A first natural person can communicate with the individual-virtual person IVP in a first natural language and a second natural person can communicate therewith in a second natural language.

An individual-virtual person IVP can have encodings available that allow it to acquire specific, protective data and/or program areas in memories of devices T3. An individual-virtual person can contain specific numbers as encodings that allow it to interrogate protected memory areas.

A plurality of individual-virtual persons IVP1...IVPn can be present at the same time in a device at a location, this representing a virtual meeting of virtual persons IVP1...IVPn. When an individual-virtual person IVP lacks the feature of authentication, the virtual meeting can be automatically ended, so that a natural person can define how long it participates in a game or question session.

Remote medical diagnosis can ensue via mediation of an individual-virtual person IVP. A natural person to be diagnosed can be located at the location B. The allocated, individual-virtual person is sent to the diagnosis location

A by network at a device. For remote diagnosis of the condition of a natural person, the individual-virtual person IVP is questioned by a physician at the location B. The user H of the individual-virtual person IVP answers at the location B and authenticates the virtual person during a time span.

5 A virtual person can also be utilized for diagnosis. This virtual diagnostician can have individual information pertaining to the user H available to it. Given an encoder call of the virtual diagnostician, this can be available to a user/caller with specific information as long as it is authenticated.

10 A specific, geometrical area of an individual-virtual person IVP can be touched by mouse pointer with known methods. The touching displays data/program/graphics that are characteristic of the geometrical area.

15 Virtual persons can employ data for statistical purposes that are shared by many individual-virtual persons that do not reveal the natural persons that belong to the IVP. Such programs can make automated, statistical data collections about individual-virtual persons possible, whereby the data of the natural persons remain protected.

20 An individual-virtual person IVP can be connected to further devices via first devices by electromagnetic data communication. The further devices can be carried by a user H and can electromagnetically send data to the first devices. The individual-virtual person IVP can process the data and thus indicate the situation wherein the user H is, for example during a mountain hike.

25 A combination of devices is localized at a remote location at which known cards, those with or without chip, with contacts, contact-free, are offered for issue for one or more persons. These cards should be produced according to individual user requests and provided/loaded with data and/or programs. The communication to the remote devices ensues via various and

fundamentally known communication channels such as, for example, Internet. The cards should be made available to one or more users in the devices at the remote location by program. The cards are to be sent to the user H after being produced or are to be picked up by the user. The user H, for this purpose, uses an individual assistance via the electronic communication possibilities of the network. Selectively based on user requests, the individual assistance can ensue in the form of a natural person and/or in the form of a program and/or in the form of a virtual person VP. What is important is that the authenticity of the user is certain for the means for producing, programming cards. It would be disadvantageous if a first user had cards (non-authentic) produced for a second user in unauthorized fashion or provided with data (sums of money). The described measures for authentication is sure that cards can only be produced during an authentic time span.

When data for the authentication of a user failed to arrive in that they are not repeatedly produced by an input device T4, data sets and/or programs that characterized individual-virtual persons IVP can be erased.

A specific application of the invention is comprised in using virtual persons VP for issuing chip cards to natural persons in chip card issuing stations. This is a matter of a combination of the devices that are localized at one location. Cards with or without electronic chips that are to be issued to users are available in a magazine for one or more persons. Further, the cards can be produced according to individual user requests and can be provided/loaded with data and/or programs. As described above, there can be electronic communication channels to remote devices. The cards, devices, programs, electronic communication possibilities can be of such a nature or, respectively, arranged such that they are made available to one or more users. The device combination contains devices for printing/labeling new cards according to individual user requests. Various card types can be looked at on a screen and cards can be individually produced in conformity



$$\ln s a'$$

The combination of devices that are localized at one location, for example the departure concourse in an airport, banking chamber, shopping mall, is referred to as card service center CSC. Audio-visual transmission devices for audio-visual communication between two persons via picture screen microphone, loudspeaker and video camera are included in the combination of devices. Further devices can contain non-personalized cards that are kept on hand in magazines for personalization. The devices can also include registration devices of biometrical features such as electronic registrations of signatures or sampling fingerprints, palms, voice analyzers. These devices can be a matter of known devices that will also be offered in improved form in future. Parts of the RICH concept as disclosed in patents EPA 0 624 851 A1 and US 5,619,683 as "Reference International Card Harmonisation Coupler" are required in a card service center in order to introduce programs and data into the greatest variety of card types. The cards, devices, programs, electronic communication possibilities can be made available in a card service center to one person or a plurality of persons as users of a card service center. Such a card service center is symbolically shown in Figure 2. The technical devices of a card service center can be arranged in a circle; the individual user locations are referenced 1 through 6.

20

30

for service and advice at a CSC. Whereas natural persons can only be available once per time unit for each provision of advice, virtual persons can be made multiply available during a time unit. Since only the programs that produce a virtual person are made available to a computerized, technical communication process, including display and interaction.

The communication with a virtual person can ensue audio-visually as well as via keyboard and picture screen. Given, thus, communication problems, for example unclear pronunciation of the user, the keyboard can be used for assistance, this making it easier for the programs behind the virtual person to unambiguously interpret information of a CSC user. A CSC user can also request the assistance of a natural person via a special key, this natural person intervening in the dialog between CSC user and virtual person and mediating help.

#### ~~Commercial Application:~~

The method and the device can be particularly commercially employed for generating virtual persons that are allocated to a user H of technical devices in order to provide the user with help in the utilization of the devices. In particular, the invention is suitable for commercial output and personalizing of chip cards with data and programs in card issuing stations, whereby the virtual persons are authorized to act only during a specific time span.